What is claimed is:

1. A method of determining dose sufficiency in a test strip for performing a measurement on a biological fluid comprising:

providing a biological fluid test strip, comprising:

a capillary fill chamber extending a length along the test strip from an intake opening to a terminus,

a reagent disposed in the capillary fill chamber between the opening and the terminus, the reagent defining a measurement zone, and

at least two dose sufficiency electrodes defining a gap therebetween and in operative communication with the capillary fill chamber, the electrodes located between the measurement zone and the terminus;

applying the biological fluid to the opening, whereby the fluid flows from the opening toward the terminus, the flow including a flow front selected from one of a concave, a convex and a substantially flat flow front;

applying a test signal to a first one of the electrodes;

determining the presence or absence of a response above a predetermined threshold at the second one of the electrodes, the response indicating that the fluid has occupied substantially all of the measurement zone regardless of whether the flow front is concave, convex or substantially flat.

2. The method of claim 1, wherein the test signal is an AC signal.

3. The method of claim 1, wherein the response comprises magnitude and phase angle information.

4. The method of claim 1, wherein the response comprises an admittance value.

5. A method of determining dose sufficiency in a test strip for performing a measurement on a biological fluid comprising:

providing a biological fluid test strip, comprising:

a fluid flow intake opening,

a fluid flow terminus,

a reagent disposed on the test strip between the opening and the terminus, the reagent defining a measurement zone, and

at least two dose sufficiency electrodes defining a gap therebetween and located between the measurement zone and the terminus;

applying the biological fluid to the opening, whereby the fluid flows from the opening toward the terminus, the flow including a flow front selected from one of a concave, a convex and a substantially flat flow front;

applying a test signal to a first one of the electrodes;

determining the presence or absence of a response above a predetermined threshold at the second one of the electrodes, the response indicating that the fluid has occupied substantially all of the measurement zone regardless of whether the flow front is concave, convex or substantially flat.

6. The method of claim 5, wherein the test signal is an AC signal.

7. The method of claim 5, wherein the response comprises magnitude and phase angle information.

8. The method of claim 5, wherein the response comprises an admittance value.

9. The method of claim 5, further comprising:

a capillary fill chamber extending a length along the test strip from the opening to the terminus; and

wherein the reagent is disposed in the capillary fill chamber.

10. A method of determining a dose sufficiency in a test strip for performing a measurement on a biological fluid, comprising:

providing a biological fluid test strip comprising:

a capillary fill chamber extending a length along the test strip,

at least two measurement electrodes in operative communication with the chamber, and

at least two dose sufficiency electrodes in operative communication with the chamber;

applying the biological fluid to the test strip;

applying a dose sufficiency test signal having an AC component to one of the dose sufficiency electrodes; and

measuring a response to the dose sufficiency test signal at the other of the dose sufficiency electrodes.

11. The method of claim 10, wherein the test signal is an AC signal.

12. The method of claim 10, wherein the response comprises magnitude and phase angle information.

13. The method of claim 10, wherein the response comprises an admittance value.

14. The method of claim 10 wherein the applying a dose sufficiency test signal results in the dose sufficiency electrodes exhibiting an edge effect.

15. The method of claim 10 wherein the AC component has a frequency of about 10 kHz.

16. A method of determining a fill sufficiency in test strip for performing a measurement on a biological fluid comprising:

providing a biological fluid test strip including

a capillary fill chamber extending a length along the test strip from an intake opening to a terminus,

a measurement zone in the chamber positioned intermediate the opening and the terminus, and

at least two dose sufficiency electrodes in operative communication with the chamber the electrodes positioned intermediate the measurement zone and the terminus;

introducing the biological fluid to the opening effective to cause the fluid to flow toward the terminus whereby the chamber is filled;

applying a test signal having an AC component to one of the dose sufficiency electrodes; and

detecting a response or an absence of the response to the test signal at the other of the dose sufficiency electrodes effective to indicate the fill sufficiency of the biological fluid.

17. The method of claim 16, wherein the test signal is an AC signal.

18. The method of claim 16, wherein the response comprises magnitude and phase angle information.

19. The method of claim 16, wherein the response comprises an admittance value.

20. A method of determining a dose sufficiency in a test strip for performing a measurement on a biological fluid, comprising:

providing a biological fluid test strip comprising:

a fluid flow intake opening;

a fluid flow terminus;

a reagent disposed on the test strip between the opening and the terminus, the reagent defining a measurement zone; and

at least two dose sufficiency electrodes defining a gap therebetween and located between the measurement zone and the terminus;

applying the biological fluid to the test strip;

applying a dose sufficiency test signal having an AC component to one of the dose sufficiency electrodes; and

measuring a response to the dose sufficiency test signal at the other of the dose sufficiency electrodes.

21. The method of claim 20, further comprising:

a capillary fill chamber extending a length along the test strip from the opening to the terminus; and

wherein the reagent is disposed in the capillary fill chamber.

22. The method of claim 20, wherein the test signal is an AC signal.

23. The method of claim 20, wherein the response comprises magnitude and phase angle information.

24. The method of claim 20, wherein the response comprises an admittance value.

25. The method of claim 20 wherein the applying a dose sufficiency test signal results in the dose sufficiency electrodes exhibiting an edge effect.

26. The method of claim 20 wherein the AC component has a frequency of about 10 kHz.

27. A method of determining a fill sufficiency in test strip for performing a measurement on a biological fluid comprising:

providing a biological fluid test strip, comprising:

a fluid flow intake opening;

a fluid flow terminus;

a measurement zone positioned intermediate the opening and the terminus, and

at least two dose sufficiency electrodes positioned intermediate the measurement zone and the terminus;

introducing the biological fluid to the opening effective to cause the fluid to flow toward the terminus;

applying a test signal having an AC component to one of the dose sufficiency electrodes; and

detecting a response or an absence of the response to the test signal at the other of the dose sufficiency electrodes effective to indicate a volume sufficiency of the biological fluid.

28. The method of claim 27, further comprising:

a capillary fill chamber extending a length along the test strip from the opening to the terminus.

29. The method of claim 27, wherein the test signal is an AC signal.

30. The method of claim 27, wherein the response comprises magnitude and phase angle information.

31. The method of claim 27, wherein the response comprises an admittance value.

32. A method of determining dosage fill level in a test strip for performing a measurement on a biological fluid comprising:

providing a biological fluid test strip including

a capillary fill chamber extending a length along the test strip from an opening to a terminus, and

at least two dose sufficiency electrodes in operative communication with the chamber the dose sufficiency electrodes positioned to define a gap between one another;

dosing the test strip with a biological fluid effective to cause the biological fluid to begin to fill the chamber;

applying a test signal having an AC component to one of the dose sufficiency electrodes;

measuring a response to the signal at the other of the dose sufficiency electrodes;

determining the dosage fill level based upon the response.

33. The method of claim 32, wherein the test signal is an AC signal.

34. The method of claim 32, wherein the response comprises magnitude and phase angle information.

35. The method of claim 32, wherein the response comprises an admittance value.

36. The method of claim 32, wherein the response varies in correlation with the degree to which the biological fluid bridges the gap.

37. A method of determining a fill level of a biological fluid in a test strip for performing a measurement on the fluid comprising:

providing a test strip including

a capillary fill chamber extending a length along the test strip from an opening to a terminus,and

at least two dose sufficiency electrodes in operative communication with the chamber the dose sufficiency electrodes positioned to define a gap between one another;

introducing the biological fluid to the opening effective to cause the fluid to flow toward the terminus whereby the chamber is filled;

applying a test signal having an AC component to one of the dose sufficiency electrodes; and

measuring a response to the test signal at the other of the dose sufficiency electrodes;

determining the fill level of the biological fluid based upon the response wherein the response varies in relation to the fill level.

38. The method of claim 37, wherein the test signal is an AC signal.

39. The method of claim 37, wherein the response comprises magnitude and phase angle information.

40. The method of claim 37, wherein the response comprises an admittance value.

41. A method of determining dosage fill level in a test strip for performing a measurement on a biological fluid comprising:

providing a biological fluid test strip, comprising:

a capillary fill chamber extending a length along the test strip from an opening to a terminus, and

at least two pairs of dose sufficiency electrodes in operative communication with the chamber, each of the pairs of dose sufficiency electrodes positioned to define a respective gap between one another;

dosing the test strip with a biological fluid effective to cause the biological fluid to begin to fill the chamber;

applying a test signal to one electrode of each of the dose sufficiency electrode pairs;

measuring a respective response to the test signal at the respective other electrode of each of the dose sufficiency electrode pairs;

determining the dosage fill level based upon the responses.

42. The method of claim 41, wherein the test signal is an AC signal.

43. The method of claim 41, wherein the response comprises magnitude and phase angle information.

44. The method of claim 41, wherein the response comprises an admittance value.

45. A method of determining a fill level of a biological fluid in a test strip for performing a measurement on the fluid comprising:

providing a test strip, comprising:

a fluid flow intake opening;

a fluid flow terminus;

a reagent disposed on the test strip between the opening to the terminus; and

at least two pairs of dose sufficiency electrodes positioned between the reagent and the terminus, each of the pairs of dose sufficiency electrodes defining a respective gap between one another;

introducing the biological fluid to the opening effective to cause the fluid to flow toward the terminus;

applying a test signal to one electrode of each of the dose sufficiency electrode pairs; and

measuring a respective response to the test signal at the respective other electrode of each of the dose sufficiency electrode pairs;

determining the fill level of the biological fluid based upon the responses.

46. The method of claim 45, wherein the test signal is an AC signal.

47. The method of claim 45, wherein the response comprises magnitude and phase angle information.

48. The method of claim 45, wherein the response comprises an admittance value.

49. A method of determining dosage fill rate in a biological fluid test strip comprising:

providing a biological fluid test strip, comprising:

a capillary fill chamber extending a length along the test strip from an opening to a terminus,

and at least two dose sufficiency electrodes in operative communication with the chamber, the dose sufficiency electrodes positioned to define a gap between one another;

dosing the test strip with a biological fluid effective to cause the biological fluid to begin to fill the chamber;

applying a test signal having an AC component to one of the dose sufficiency electrodes;

measuring a first response to the test signal at the other of the dose sufficiency electrodes at a first time;

measuring a second response to the test signal at the other of the dose sufficiency electrodes at a second time; and

determining a rate at which the biological fluid fills the chamber based at least in part upon the first response and the second response.

50. The method of claim 49, wherein the test signal is an AC signal.

51. The method of claim 49, wherein the response comprises magnitude and phase angle information.

52. The method of claim 49, wherein the response comprises an admittance value.

53. The method of claim 49 further comprising recording the first response and the second response.

54. A method of determining dosage fill rate in a biological fluid test strip comprising:

providing a biological fluid test strip, comprising:

a fluid flow intake opening;

a fluid flow terminus;

a measurement zone positioned between the opening and the terminus,

and at least two dose sufficiency electrodes positioned between the measurement zone and the terminus, the dose sufficiency electrodes positioned to define a gap between one another;

dosing the test strip with a biological fluid effective to cause the biological fluid to begin to flow from the opening toward the terminus;

applying a test signal having an AC component to one of the dose sufficiency electrodes;

measuring a first response to the test signal at the other of the dose sufficiency electrodes at a first time;

measuring a second response to the test signal at the other of the dose sufficiency electrodes at a second time; and

determining a rate at which the biological fluid fills the chamber based at least in part upon the first response and the second response.

55. The method of claim 54, further comprising:

a capillary fill chamber extending a length along the test strip from the opening to the terminus.

56. The method of claim 55, wherein the test signal is an AC signal.

57. The method of claim 55, wherein the response comprises magnitude and phase angle information.

58. The method of claim 55, wherein the response comprises an admittance value.

59. The method of claim 55 further comprising recording the first response and the second response.

60. A test strip for performing a measurement on a biological fluid comprising:

a capillary fill chamber extending a length along the test strip from an opening to a terminus;

at least two measurement electrodes in operative communication with the chamber; and

at least two dose sufficiency electrodes in operative communication with the chamber;

wherein the dose sufficiency electrodes have first edges substantially parallel to the length of the capillary chamber and second edges substantially perpendicular to the length of the capillary fill chamber with the first edges being of greater length than the second edges.

61. A test strip for performing a measurement on a biological fluid, comprising:

a capillary fill chamber extending a length along the test strip from an opening to a terminus;

a measurement zone in the chamber positioned intermediate the opening and the terminus, and

at least two dose sufficiency electrodes in operative communication with the chamber the electrodes positioned intermediate the measurement zone and the terminus;

wherein the dose sufficiency electrodes have a first axis substantially parallel to the length of the capillary chamber and a second axis substantially perpendicular to the length of the capillary fill chamber with the first axis being of greater length than the second axis.

62. A test strip for performing a measurement on a biological fluid comprising:

a fluid flow path extending a length along the test strip from an opening to a terminus;

at least two measurement electrodes in operative communication with the fluid flow path; and

at least two dose sufficiency electrodes in operative communication with the fluid flow path;

wherein the dose sufficiency electrodes have first edges substantially parallel to the length of the fluid flow path and second edges substantially perpendicular to the

length of the fluid flow path with the first edges being of greater length than the second edges.

63. The method of claim 62, further comprising:

a capillary fill chamber extending a length along the test strip from the opening to the terminus.

64. A test strip for performing a measurement on a biological fluid, comprising:

a fluid flow path extending a length along the test strip from an opening to a terminus;

a measurement zone in the chamber positioned intermediate the opening and the terminus, and

at least two dose sufficiency electrodes in operative communication with the fluid flow path, the electrodes positioned intermediate the measurement zone and the terminus;

wherein the dose sufficiency electrodes have a first axis substantially parallel to the length of the fluid flow path and a second axis substantially perpendicular to the length of the fluid flow path with the first axis being of greater length than the second axis.

65. The method of claim 64, further comprising:

a capillary fill chamber extending a length along the test strip from the opening to the terminus.